

Release Notes

Intel PROSet/Wireless WiFi Software V22.20.0.6 PV Release

Wireless Solution Group

WW50



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Release Overview

- Intel is announcing the 22.20.0.6 Production Version (PV) release of the Intel® PROSet/Wireless WiFi Software.
 - This version is a PV version to support KBL, GLK, CNL, CFL, WHL, AML, CML, ICL, LKF, TGL platforms. This version is a maintenance release that addresses known issues reported in previous software versions
 - This software package includes updates in the 22.20.0.6, 21.80.12.5 drivers for the following devices: TyP2, HrP2, CcP2, ThP2, JfP2, JfP1
 - This release contains certified drivers for Windows 10 October 2018 Update (RS5), for Windows 10 April 2019 Update (19H1) and for Windows 10 May 2020 Update (20H1)
 - This release was validated also for Windows 10 November 2019 Update (19H2) and Windows 10 October Update (20H2)

General Information

WiFi Software Build -

- WiFi TIC PHWFW02595_22.20.0.6
 - Includes 22.20.0.6 for Win10 RS5/19H1/20H1 (JfP1/JfP2/CcP2/HrP2/TyP2)
 - Includes 21.80.12.5 for Win10 RS5/19H1/20H1 (JfP1/JfP2/ThP2)
 - Includes 20.70.19.1 for Win10 RS5/19H1/20H1 (WsP/SfP)
 - Includes 19.51.31.1 for Win10 RS5/19H1/20H1 (StP/SdP)

Tested Platforms

- Lakefield (LkF)
- Sky Lake (SkL)
- Kaby Lake (KbL)
- Kaby Lake refresh (KbL-R)
- Apollo Lake (ApL)
- Broadwell (BDW)
- Gemini Lake (GLK)
- Gemini Lake Refresh (GLK-R)
- Cannon Lake (CNL)
- Coffee Lake (CFL)
- Whiskey Lake (WHL)
- Amber Lake (AML)
- Ice Lake (ICL)
- Comet Lake (CML)
- Tiger Lake(TGL)

Supported Operating Systems (see layout slide for more details)

- Windows 10

Supported Hardware

(see layout slide for more details)

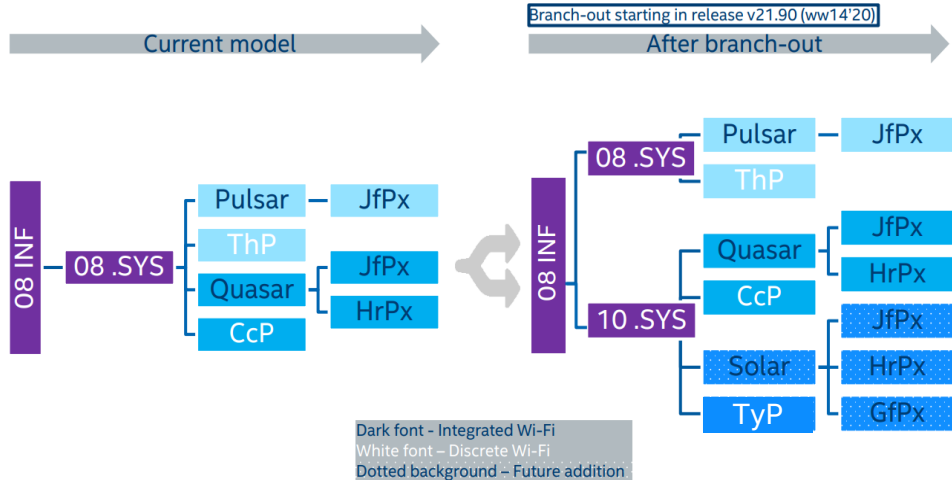
- Typhoon Peak 2 (TyP2)/AX210
- Harrison Peak2 (HrP2)/AX201
- Cyclone Peak 2 (CcP2)/AX200
- Thunder Peak2 (ThP2)/9260
- Jefferson Peak2 (JfP2)/9560
- Jefferson Peak1 (JfP1)/9461/9462
- Windstorm Peak(WsP)/8265
- Sandy Peak (SdP)/3168
- Snowfield Peak (SfP) / 8260
- Oak Peak (OkP)/18265
- Douglas Peak (DgP)/18260 (WiGig)
- Maple Peak (MpL)/17265 (WiGig)
- Stone Peak 2 D0 (StP2)/7265
- Stone Peak 1 (StP1)/3165

22.20 Version Release – WiFi Package Layout

- The blue areas indicate the new SW in this release (22.20.0.6).

	Win10/ DCH
TyP2 AX210	22.20.0.6 NetWTw10
HrP2 AX201	
CcP2 AX200	
Quasar+ JfP1/9461/9462	
Quasar+ JfP2/9560	
Pulsar + JfP1/9461/9462	22.20.0.6¹ NetWTw08 (21.80.12.5)
Pulsar + JfP2/9560	
ThP2/9260	
ThP2/9260	
WsP/8265	20.70.19.1 NetWTw06
SfP/8260	
SdP/3168	19.51.31.1 NetWT(n/w)04
StP1/3165	
StP2-D/7265	

PULSAR DRIVER BRANCH-OUT



¹. Please note: Since 22.20 and 21.80 drivers use same inf, device manager properties will show 22.20.0.6 driver. Relevant sys file (netwtw08.sys-21.80.12.5) shown at “driver file details”.

Corrected Customer Issues since 22.10.0.7

22.20.0.6 driver only

Key	Headline	Reported HW	Description
WIFI-69090	ANT tool displays incorrect TAS info	HrP2	When NIC was in power save mode, incorrect TAS values were presented. Fix: Disable power save mode when running TAS flow.
WIFI-84346	BSOD 0x7E occurred during run-in test.	JfP1-SA (9461)	Driver configuration flow was mistakenly closed twice
WIFI-85032	BSOD occurs during sharing files	JfP2	Double memory release in reordering buffer in case of duplicate packet
WIFI-85612	BSOD 0x7e and point to wifi after restart unit	JfP2	Driver configuration flow was mistakenly closed twice Same as wifi-84346
WIFI-86646, WIFI-82584	system have occur BSOD(0X7E) during check DMI information	CcP2	Scan client timers were mistakenly released during driver operation. Fix: Scan timers released only during halt flow
WIFI-85836	0x133_ISR_Netwtw10!cosai_lock_irqsave_win_kernel	CcP2	Deadlock accessing bss table during competing flows of receiving a beacon and statistics update
WIFI-85312	Try to switch PC(Sta status) bandwidth from 2.4G to 5G. Error after Mobile phone and PC connected succeed via PC manage under PC connect 2.4G AP	HrP2	Fix issue which causes assert 0x91, and sometimes caused Tx defer without real reason

Corrected Customer Issues since 21.80.11.5

21.80.12.5 driver only

Key	Headline	Reported HW	Description
	Updated version number to support Upgradability		

Extension INF/ Component INF

INF	Version	Summary	HW
PieComponent.inf	22.1020.0.1	Time and date update	TyP2/HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP
PieExtension.inf	22.1020.0.1	Time and date update	TyP2/HrP2/CcP2/JfP/ThP2/SfP/WsP/SdP/StP

DCRs and New Features – 22.20 PV

DCR #	Description	Improvements	Relevant HWs
DCR-840	Request to add Band information to ANT	Added indication to ANT tool to define if the system is connected to 6GHz or not	TyP2
DCR-835	TX power dynamic power adjustment for Ukraine on 5GHz (for TyP2)	Background: Intel reference antenna gain is 3dBi for 2.4Ghz and 5dBi for 5Ghz for Ukraine to pass modular certification. Change: Tx power will be dynamic adjusted for Ukraine on 5GHz. Mean driver will reduce the power automatically if the DRS mechanism found the system is in Ukraine.	TyP2
DCR-858	TX power dynamic power adjustment for Ukraine on 5GHz for HrP/CcP	Background: Intel reference antenna gain is 3dBi for 2.4Ghz and 5dBi for 5Ghz for Ukraine to pass modular certification. Change: Tx power will be dynamic adjusted for Ukraine on 5GHz. Mean driver will reduce the power automatically if the DRS mechanism found the system is in Ukraine	HrP/CcP

Software Known Issues and Limitations – 22.10

Key related	Description	OS	Notes
TyP2 HW support	This release supports only QS and SRA samples for TyP2	Windows 10	
Wi-Fi 6E enablement	Wi-Fi 6E is not enabled by default. For testing purposes please refer to Intel® Wi-Fi 6E Single User Performance Testing Setup (#626892) for Wi-Fi 6E enablement steps	Windows 10	
WIFI-89706	[GNNR] Failed to associate with 5GHz AP	Win PE	
WOT-1926	[CITU] marginal test feature showing poor results on JsL+HrP and CML+JfP	Windows 10	

Product Health

Domain	22.20	Details
Connectivity		
Platform		
Data Path \ TpT		
Miracast		
SoftAP		
BT-Coex		
WiFi Device Power		
Cert (WHQL)		

Legend:

	Broken, Not usable
	Usable, major issues exist
	Usable

<Color Guidelines>

Critical bug(s) or critical usability issues

minimum 1 High P1. if >=5 High P1 – mandatory. Also If > 20 High - mandatory

Notes on the DDD Debug Layout Usage

- Included with the user distributed layouts is also a DDD debug layout. This layout incorporates debug capabilities to be used by OEM validation teams to provide logs and information about an issue to Intel engineering.
- This layout is not to be included on production systems or to be shared with end-user customers.
- To use the DDD layout, follow the instructions below:
 - 1) Clean the Windows event log by the following commands with administrator prompt.
wevtutilcl system
wevtutilcl application
wevtutilcl Microsoft-Windows-WLAN-AutoConfig/Operational
 - 2) Install DDD release.
 - 3) Perform test until issue reproduction.
 - 4) Note down the exact time when issue reproduced.
 - 5) Disable WiFidevice in the device manager.
 - 6) Copy all files below to share with Intel:
 - I. "System.evtx" under C:\Windows\System32\winevt\Logs
 - II. "Application.evtx" under C:\Windows\System32\winevt\Logs
 - III. "Microsoft-Windows-WLAN-AutoConfig%4Operational.evtx" under C:\Windows\System32\winevt\Logs
 - IV. "WiFiLog-XXX.log" for ThP/JfP/CcP/HrP is under C:\ (for RS3/RS4) and C:\Windows\System32\Drivers\DriverData\Intel\WlanOut\RLG\WiFiLog and for legacy devices it is under C:\ (for RS5 or later)
 - V. "dddLog_XXX.log" for ThP/JfP/CcP/HrP is under C:\Windows\Temp\DDDLogs\ (for RS3/RS4) and under C:\Windows\System32\Drivers\DriverData\Intel\WlanOut\DDD (for RS5 or later). For legacy devices "dddLog_XXX.bin" is under C:\Windows\Temp\DDDLogs\ (for RS5 or later)
 - VI. "MurocLog.log" under C:\Program Files\Intel\WiFi\UnifiedLogging\
 - VII. "MEMORY.DMP" under C:\Windows\System32

Abbreviations

Acronym	Codename	Intel product name
Typ2	Typhoon Peak 2	Intel® Wi-Fi 6E AX210
CcP2	Cyclone Peak 2	Intel® Wi-Fi 6 AX200
HrP2	Harrison Peak 2	Intel® Wi-Fi 6 AX201
JfP1- DA	Jefferson Peak 1 Diversity antenna	Intel® Wireless-AC 9462
JfP1- SA	Jefferson Peak 1 Single antenna	Intel® Wireless-AC 9461
JfP2	Jefferson Peak 2	Intel® Wireless-AC 9560
ThP2	Thunder Peak 2	Intel® Wireless-AC 9260
WsP	Windstorm peak	Intel(R) Dual Band Wireless-AC 8265
SdP	Sandy Peak	Intel(R) Dual Band Wireless-AC 3168
StP2	Stone Peak 2	Intel(R) Dual Band Wireless-AC 7265
StP1	Stone Peak 1	Intel(R) Dual Band Wireless-AC 3165
SfP	Snowfield Peak	Intel(R) Dual Band Wireless-AC 8260
WkP2	Wilkins Peak 2	Intel(R) Dual Band Wireless-AC 7260
WkP1	Wilkins Peak 1	Intel(R) Dual Band Wireless-AC 3160

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Estimated results were obtained prior to implementation of recent software patches and firmware updates intended to address exploits referred to as "Spectre" and "Meltdown". Implementation of these updates may make these results inapplicable to your device or system.

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